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HOT BLOW FORMING CONTROL METHOD

ABSTRACT OF THE DISCLOSURE

A sheet material is gripped at its edges and hot blow formed by a pressurized working gas against a forming tool surface. The flow characteristics of the material are determined at increasing gas pressures over a range of temperature relevant to the forming operation. A predetermined pressure/time schedule is determined at a reference temperature for rapid shape formation of good parts on a continual basis. The process is then controlled as parts are thus formed by measuring the forming temperature of the parts and correcting the pressure time schedule, using the determined flow characteristics, for the actual temperature to achieve the desired shape evolution of the parts.